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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,602	08/09/2001	Atsuhiko Ueda	WEN-005	5260
23353	7590	09/20/2004	EXAMINER	
RADER FISHMAN & GRAUER PLLC LION BUILDING 1233 20TH STREET N.W., SUITE 501 WASHINGTON, DC 20036			AKHAVANNIK, HUSSEIN	
			ART UNIT	PAPER NUMBER
			2621	

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/924,602	<b>Applicant(s)</b> UEDA, ATSUHIRO	
	<b>Examiner</b> Hussein Akhavannik	<b>Art Unit</b> 2621	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2004, 2002, 2001</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Objections*

1. Claim 5 is objected to because of the following informalities:

In claim 5, line 3, "presotres" should be changed to "prestores".

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisk et al (Fisk, N.M. et al, Fetal Telemedicine: Interactive Transfer of Real Time Ultrasound and Video via ISDN for Remote Consultation, Advanced Image And Video Communications And Storage Technologies, Amsterdam, Mar. 20-23, 1995, v01.2451 pg. 389-400.) in view of Tipirneni (U.S. Patent No. 6,381,029 B1).

Referring to claim 1,

- i. A dial-up communication unit which carries out digital communication with one or more clients through a telephone network is illustrated by Fisk et al in figure 3 by the 30 channel inverse multiplexer located at the Isle of Wright. The multiplexer carries out digital communication through the ISDN30 Network to the CPU located at the London location. Fisk et al explain that the ISDN network is a dial up network on page 398, forth paragraph.

- ii. An Internet communication unit which carries out digital communication with one or more clients through the Internet is not explicitly explained by Fisk et al. Fisk et al explain that the Internet has been used for remote consultation on page 398, third paragraph, but that the transmission rate was too low at the time (article was published in 1995). Furthermore, Fisk et al explain that the ISDN network is a public dial-up network, much like the Internet, allowing additional hospitals to acquire the correct terminal equipment to connect to the network on page 398, forth paragraph. Nevertheless, Tipirneni illustrates a modem connecting to the Internet in figure 3 by the connection between the modem 68 and the Internet 100. Tipirneni explains that the modem is used to translate an analog telephone signal to the digital domain of the Internet in column 5, lines 39-42. Tipirneni also explains that transmitting images through the Internet is beneficial because an image may be viewed at multiple locations in column 1, lines 44-63. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an internet communication unit to carry out digital communication with one or more clients through the Internet in the system of Fisk et al, as suggested by Tipirneni, because of the rapid expansion of the Internet since 1995, making the Internet an efficient and widely available medium for multiple locations to view the same data, which is a goal of both the system of Fisk et al (page 398, forth paragraph) and Tipirneni (column 5, lines 39-42).
- iii. An interface for image input which at least receives a moving image signal picked up by image pickup means attached to a medical device is illustrated by Fisk et al in figure 3 by the ultrasound scanning equipment.

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- iv. An image encoding unit which encodes the moving image signal to a digitized image signal at one or more preset data rates in real time is illustrated by Fisk et al in figure 3 by the VC2300 Codec. Fisk et al explain that the codec performs image encoding on page 395, first full paragraph and explain that the data rate is chosen to be 2Mbit/s out of three possible data rates on page 396, final paragraph.
- v. An image distribution unit which distributes at least one digitized image signal at one or more of the data rates to the one or more clients through the telephone network or the Internet is illustrated by Fisk et al in figure 3. The capturing system in the Isle of Wright distributes the digitized and encoded images to the viewing system in London through the ISDN30 Network (corresponding to the telephone network).

Referring to claim 5,

- i. A data rate memory unit which prestores plural sets of data rate groups consisted of one or more of the data rates is explained by Fisk et al on page 396, final paragraph, wherein the data rates of 2, 1, and .5 Mbit/s are stored on the control unit illustrated in figure 3.
- ii. A data rate setting means for setting the data rates of the digitized image signal by selecting from the plural stored sets of the data rate groups is explained by Fisk et al on page 396, final paragraph wherein a data rate of 2 Mbit/s is selected from the prestored group.
- iii. The image encoding unit encoding the image signal to the digitized image signal at all the rates included in the selected data rate group is illustrated by Fisk et al in figure

3 by the VC2300 Codec, which encodes the image signals at the selected rate of 2 Mbit/s as explained on page 396, final paragraph.

Referring to claim 7,

i. A patient identifying data input means, connected with a patient information database, for inputting patient identifying data identifying a patient to be picked up by the image pickup means is not explicitly explained by Fisk et al. However, Tipirneni illustrates a physician accessing patient folders 360 in figure 10. The patient information includes images taken of a patient by a camera system 100 (in figure 1) and uploaded to the patient file by the uploader system 50 (in figure 2). Tipirneni explains that the camera system may include medical image information and physiological data in column 3, lines 38-62.

ii. A data distribution unit which searches patient data corresponding to the patient identifying data through the patient information database when the patient identifying data are inputted by the patient identifying data input means, and which distributes all or a part of the patient data to the one or more clients through the telephone network or the Internet is not explicitly explained by Fisk et al. However, Tipirneni illustrates transmitting a patient folder to a physician's computer 378 in figure 10. Tipirneni illustrates that the physician receives the data through the Internet 100 in figure 4.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to input patient identifying data identifying a patient to be picked up by the image pickup means and to distribute all or a part of patient data to one or more clients in the system of Fisk et al, as suggested by Tipirneni, because the physician can

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view the image of the patient while reviewing the patient's past medical history and thereby is able to provide a more accurate diagnosis.

Referring to claim 10,

i. A communications unit which carries out digital communication with one or more clients through a telephone network or the Internet is illustrated by Fisk et al in figure 2.

The communication unit carries out digital communication with a client in London through the ISDN30 Network, which corresponds to the telephone network.

Furthermore, Fisk et al explain that an ISDN network allows for expansion to multiple hospitals on page 398, forth paragraph.

ii. A dial-up communication unit which carries out digital communication with one or more clients through a telephone network corresponds to claim 1i.

iii. An Internet communication unit which carries out digital communication with one or more clients through the Internet is corresponds to claim 1ii.

iv. An interface for image input which at least receives a moving image signal picked up by image pickup means attached to a medical device corresponds to claim 1iii.

v. An image encoding unit which encodes the moving image signal to a digitized image signal at one or more preset data rates in real time corresponds to claim 1iv.

vi. An image distribution unit which distributes at least one digitized image signal at one or more of the data rates to the one or more clients through the telephone network or the Internet corresponds to claim 1v.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fisk et al in view of Tipirneni, and further in view of Takahashi (U.S. Patent No. 5,950,164).

Referring to claim 2,

- i. A voice input means for inputting a voice signal is illustrated by Fisk et al in figure 3 by the microphone.
- ii. A voice grade selecting means for selecting a voice grade for encoding is not explicitly explained by Fisk et al or Tipirneni. However, Takahashi explains selecting a voice encoding bit rate from among different encoding bit rates in column 1, lines 56-65.
- iii. A voice encoding unit which encodes the voice signal inputted by the voice input means to a digitized voice signal at a data rate conforming to the voice grade selected by the voice grade selecting means is not explicitly explained by Fisk et al or Tipirneni. However, Takahashi explains encoding a voice signal according to a bit rate that is selected in column 1, lines 56-65. Takahashi explains that by encoding the voice signal, the amount of data that the voice requires is reduced depending on the level of quality desired. By encoding the voice signal in the system of Fisk et al and Tipirneni, the bandwidth required to transmit the voice data would be reduced. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select a voice grade for encoding and encode the voice signal according to the selected data rate in the system of Fisk et al and Tipirneni, as suggested by Takahashi, because the bandwidth required to transmit the data between the Isle of Wright and London would be reduced.
- iv. A voice distribution unit which distributes the digitized voice signal to the one or more clients through the telephone network or the Internet is illustrated by Fisk et al in figure 3. The capturing system in the Isle of Wright distributes the digitized and encoded



voice signals to the viewing system in London through the ISDN30 Network (corresponding to the telephone network). The captured voice signals in London are played on the speaker.

5. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisk et al in view of Tipirneni, and further in view of Chen et al (U.S. Patent No. 5,553,609).

Referring to claim 3,

- i. The interface for image input receiving plural moving image signals is not explicitly explained by Fisk et al or Tipirneni. However, Chen et al illustrate a video switch control box 80 in figure 5, which receives plural moving images from plural cameras 68(1) to 68(n). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the system of Fisk et al and Tipirneni to include an interface for image input receiving plural moving images, as suggested by Chen et al, because multiple views of the patient can be selected by a medical professional, thereby providing a more accurate clinical decision by the medical professional.
- ii. The image encoding unit encoding each of the plural moving image signals to a digitized image signal is illustrated by Fisk et al in figure 3 by the VC2300 Codec, which encodes the image signals.
- iii. The image distribution unit distributing all or a part of the plural digitized image signals to the one or more clients is illustrated by Fisk et al in figure 3. The capturing system in the Isle of Wright distributes the digitized and encoded images to the viewing

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system in London (client) through the ISDN30 Network (corresponding to the telephone network).

Referring to claim 4, the image distribution unit distributing only an image signal selected from among the plural image signals in accordance with an image selecting signal from the client corresponds to claim 3i, wherein only one video signal is selected by the video switch control box ("to choose a desired video camera" in column 10, lines 45-50 of Chen et al), which is the video signal transmitted by the system of Fisk et al, Tipirneni, and Chen et al to a client.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fisk et al in view of Tipirneni, and further in view of LeMahieu (U.S. Patent No. 6,757,413 B1).

Referring to claim 6,

i. An interface for measurement signal input which receives a measurement signal indicating a value of a vital sign including at least one selected from temperature, blood pressure, pulses, the number of breaths, and oxygen saturation in blood microscope is not explicitly explained by Fisk et al or Tipirneni. However, LeMahieu illustrates non-camera peripherals 26 in figure 2 connected to the patient system 12 and explains that non-camera peripherals include such items such as a blood pressure meter, pulse meter, glucose monitor, and/or a stethoscope in column 3, lines 25-27.

ii. A measurement signal encoding unit which encodes the measurement signal to a digitized measurement signal in real time is not explicitly explained by Fisk et al or Tipirneni. However, LeMahieu illustrates a main board 40 in figure 2 and explains that the main board transfers the data provided by the non camera peripheral to the medical professional station 14 in column 6, lines 53-65. In order to transfer information

collected by the non camera peripherals 26 into the digital CPU 20, it is inherent that the main board must first encode the signals to a digitized measurement signal.

iii. A measurement signal distribution unit which distributes the digitized measurement signal to the one or more clients through the telephone network or the Internet is not explicitly explained by Fisk et al or Tipirneni. However, LeMahieu illustrates transferring the information collected at the patient system 12 to the medical professional system 14 using a plain old telephone system (POTS) in figure 1. LeMahieu explains that by transferring the information collected by the non camera peripherals along with the image data collected, fully rounded in-home medical monitoring is possible at a low-cost in column 6, line 66 to column 7, line 7. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to receive a measurement signal indicating a value of a vital sign, encode the measurement signal, and distribute the measurement signal to one or more clients in the medical image distribution system of Fisk et al and Tipirneni because complete information about the patient would be available for a medical profession allowing low cost patient monitoring.

7. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisk et al in view of Tipirneni, and further in view of Takagi et al (U.S. Patent No. 5,140,458).

Referring to claim 8, the medical device including a surgical microscope is not explicitly explained by Fisk et al or Tipirneni. However, Takagi et al explain that typical medical optical instruments include a surgical microscope in column 1, lines 14-20. It would have been an obvious matter of design choice to modify the system of Fisk et al and Tipirneni by using a surgical microscope rather than a ultrasound scanner, since the Applicant has not disclosed that

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having a surgical microscope solves any stated problem or is for any particular purpose and it appears that the image distribution system of Fisk et al and Tipirneni would work equally as well with any medical device.

Referring to claim 9, the medical device including a slit lamp is not explicitly explained by Fisk et al or Tipirneni. However, Takagi et al explain that typical medical optical instruments include a slit lamp in column 1, lines 14-20. It would have been an obvious matter of design choice to modify the system of Fisk et al and Tipirneni by using a slit lamp, since the Applicant has not disclosed that having a slit lamp solves any stated problem or is for any particular purpose and it appears that the image distribution system of Fisk et al and Tipirneni would work equally as well with any medical device.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Hu et al (U.S. Patent No. 6,621,918 B1) -- To exhibit transferring medical image data to a remote station wherein the compression level can be changed by an operator as explained in column 7, line 40 to column 8, line 11.
- Zeineh (U.S. Patent No. 6,606,413 B1) -- To exhibit sending compressed image information captured by a microscope to a remote station as explained in the abstract.
- Miyazaki et al (U.S. Patent No. 6,656,115 B1) -- To exhibit transmitting physiological data and image data from a client station to a physician station over a network as illustrated in figure 1.

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- Modney (U.S. Patent No. 6,014,432) – To exhibit transmitting physiological data and image data from a client station to a physician station over a network as illustrated in figure 2.
- DiRienzo (U.S. Patent No. 6,006,191) – To exhibit transmitting medical images from a radiology center to a hospital for physician review as illustrated in figures 1-2.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hussein Akhavannik whose telephone number is (703)306-4049. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H. Boudreau can be reached on (703)305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hussein Akhavannik  
September 15, 2004

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